Atari Computer Enthusiasts (N.S.W.)

AT THE THIRD STROKE,
IT WILL BE...

4:53 20

MENU

FINE LIST

DOS.SYS
DUP.SYS
CATALOG.BAS $3.50
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ATARI COMPUTER ENTHUSIASTS (N.S.W.)

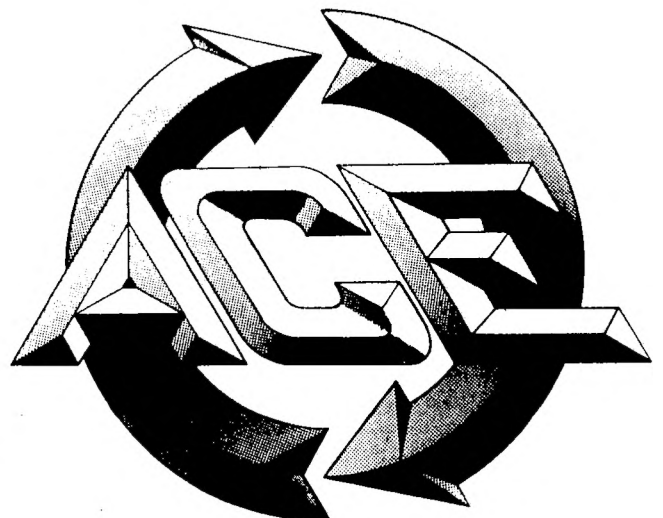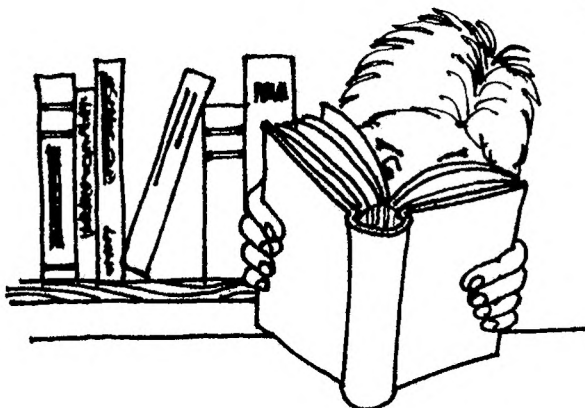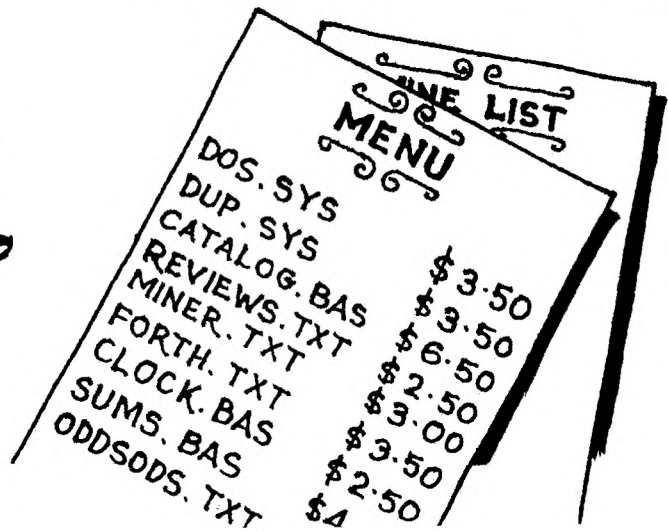Atari Computer Enthusiasts (N.S.W.) is an independent, non-profit computer users' group loosely affiliated with Atari Computer Enthusiasts in the U.S.A. We have no connections with ATARI, Inc. or their Australian distributors, Futuretronics Australia Pty Ltd. Our aims include promotion of the ATARI 400/800 Home Computer System, instructing both beginners and advanced users in programming techniques, exchanging hints, tips and ideas amongst members and generally enjoying ourselves.

Meetings are held at 6.0 P.M. on the first Monday of every month (or the second Monday if it clashes with a public holiday) in the Lecture Room above Computer Wave, 325 George Street, Sydney. Visitors welcome.

Membership to A.C.E.(N.S.W.) is $30 for the first year and $15 per year thereafter (or $20 and $10 respectively for students under 18 and still at school). Subscriptions, postal enquiries and all correspondence should be directed to:

> Atari Computer Enthusiasts (N.S.W.)
> G.P.O. Box 4514,
> Sydney,
> N.S.W. 2001

Phone contacts:

> Tony Reeve (President): 452-2974
> Barry Williams (Vice President): 452-2229
> Steven Marcus (Secretary/Treasurer): 387-4287
> John Massara (Software Exchange): 713-6798
> Peter Bamford (Meetings Organiser): (043) 42-2655 (Home) or (043) 40-1201 (Work)

* * *

MEETING DATES

*1st August
5th September
*10th October (due to 8-Hour Day Public Holiday)
7th November
*5th December

* indicates release dates for INSIDE INFO (subject to unforseen circumstances). Deadline for articles is the meeting prior to the release date.

* * *

FROM THE PRESIDENT

ATARI, Inc. has released its new range of computers in the U.S.A. and, while remaining software compatible with the 400/800, offer enhancements which I'm sure will keep it the best home computer on the market. I believe Futuretronics will release these locally as soon as possible, with prices competitive with the opposition. [What opposition? The ATARI is in a class of its own. Nothing comes near it!! -- GF]

A.C.E.(N.S.W.) is growing each month with a total membership now well over 200. While that's all very fine, we are not without problems. One I bring to your attention - the major expense and effort of the club -- is INSIDE INFO. You will have noticed that it's now a registered publication, which has halved our postage costs. Up until recently, Computer Wave has fully subsidised the printing costs, for which we are very grateful. It's now time for the club to bear these costs and with that in mind, the committee has decided to accept advertising in INSIDE INFO. It will be restricted to a maximum of 4 pages out of the 22 and if this is accomplished, it will almost recoup printing costs.

Ask your local computer store or any other potential advertiser if they're interested in some space in INSIDE INFO and pass on any leads to Barry Williams (Vice President) who is co-ordinating the advertising drive.

- Tony Reeve

MENU

by J.E. Maddock

This menu program uses GRAPHICS 0 with a text window, so as not to scroll the menu off the top of the screen. POKE 703,4 makes the text window. A 24 is normally found in this location. If you want to print to the upper part of the screen after executing this POKE, you'll have to use PRINT #6.

```
1 REM ############################
2 REM #         MENU             #
3 REM #     by Jeff Maddock      #
4 REM # Published by Atari Computer #
5 REM #   Enthusiasts (N.S.W.)   #
6 REM #       August 1983        #
7 REM ############################
100 TRAP 260:OPEN #1,6,0,"D:x.x"
110 GRAPHICS 0:COL=1:POKE 752,1:POKE 7
10,0
120 DIM A$(17),F$(14):TRAP 180
130 INPUT #1;A$
140 POSITION COL,LINE:? A$
150 LINE=LINE+1
160 IF LINE>18 THEN COL=20:LINE=0

170 GOTO 130
180 CLOSE #1:POKE 703,4
190 TRAP 190:? CHR$(125);"Load which p
rogram";:INPUT A$
200 TRAP 240
210 F$="D:":F$(3)=A$
220 IF A$="DOS" OR A$="DOS.SYS" OR A$=
"DUP.SYS" THEN TRAP 270:DOS
230 RUN F$
240 ? :? "Can't load ";F$;"."
250 FOR WAIT=1 TO 1000:NEXT WAIT:GOTO
190
260 ? "Can't read directory.":END
270 ? :? "Need DUP.SYS to go to DOS.":
END
```
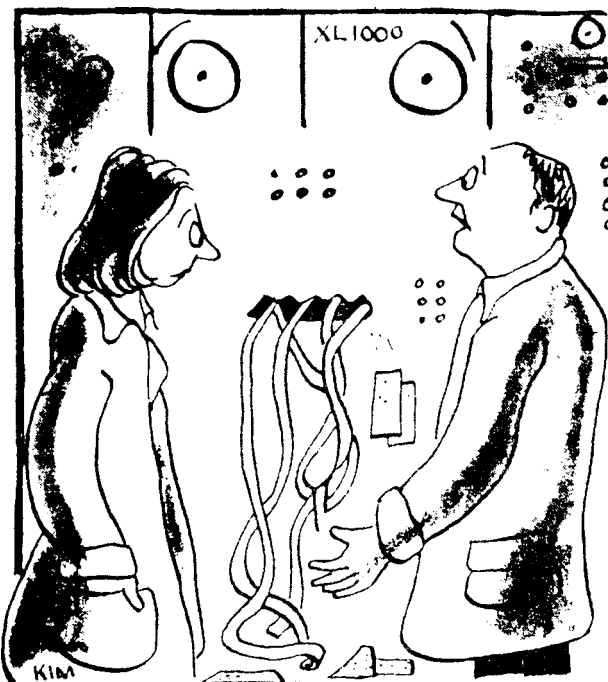

"It threw up when I programmed it to select the most honest political candidate."

... STOP PRESS ... STOP PRESS ...

Our old meeting place in OTC House is being converted to office space, therefore the meeting venue has been changed to the upstairs room at Computer Wave, 325 George Street, Sydney until further notice. The entrance is adjacent to the mid block pedestrian signals between Hunter Street and Martin Place (near Wynyard Station). Meetings start at 6.0 P.M. as usual.

... STOP PRESS ... STOP PRESS ...

CATALOGUE

by Peter Bamford

Catalogue is a database type of programme for keeping track of books. It can easily be modified for any similar purpose. I wrote it to run on a 16k cassette based machine, as most similar programmes I've seen are disk based. It uses in-memory storage, so is limited only by memory size. The record length is 80 characters in 5 divisions and with a 16k machine allows 50 records.

The idea for the programme came from seeing all those great machine language routines in magazines and wanting to use them. All searching and sorting is done in machine language and is fast! The sort routine is from ANTIC Vol.1 No.4 and allows sub-sorting of all fields. The search routine is from COMPUTE! August 1982 and searches a super string for a target string. Other routines and programming ideas came from reading other programmes and a few I developed myself.

The programme is (hopefully) well trapped to avoid incorrect input and is -- to use the "in" buzz word - user friendly. On running the programme, you must first use the ENTER or LOAD options, otherwise problems may occur.

Line Descriptions
Lines 20000-22060 are the initialisation.
Lines 50-90 cover the menu.
Lines 100-490 cover entry and editing of entries.
Lines 500-1540 print entries to the screen.
Lines 2000-2090 are the sort section.
Lines 2500-2740 are the search routine.
Lines 3000-3560 are for saving the data to tape.
Lines 5500-5700 are for loading the data from tape.
These last 2 routines use short inter-records gaps to speed up loading and saving.

```
1 REM ###############################
2 REM #          CATALOGUE          #
3 REM #       by Peter Bamford       #
4 REM # Published by Atari Computer  #
5 REM #     Enthusiasts (N.S.W.)     #
6 REM #          August 1983         #
7 REM##############################
10 GOSUB 20000
50 Z=14:? CHR$(125):POKE 709,N8:POKE 7
10,194:POKE 712,194:POSITION 15,N0:? "
CATALOGUE"
52 POSITION 25,N1:? "ENTRIES :";RN
55 EDIT=N0:IF RN=RNMAX THEN POSITION N
5,N1:? CHR$(253);"MEMORY FULL NO MORE
ENTRIES"
60 POSITION N5,N3:? "1  ENTER DATA":PO
SITION N5,N5:? "2  AMEND ENTRY":POSITI
ON N5,N7:? "3  DELETE ENTRY"
65 POSITION N5,N9:? "4  LIST CATALOGUE
":POSITION N5,11:? "5  SORT":POSITION
N5,13:? "6  SEARCH":POSITION N5,15
67 ? "7  SAVE CATALOGUE":POSITION N5,1
7:? "8  LOAD CATALOGUE":POSITION N5,19
:? "9  QUIT"
68 POSITION 16,23:? "select";
70 GET #N2,A:A=A-48:IF A=N1 THEN 100
71 IF RN=N0 AND A<8 THEN POSITION N5,2
2:? "NO ENTRIES";:GOTO 70

72 IF A=N2 THEN 100
74 IF A=N3 THEN 3500
76 IF A=N4 THEN 500
80 IF A=N5 THEN 2000
83 IF A=N6 THEN 2500
85 IF A=N7 THEN 3000
87 IF A=N8 THEN 5500
88 IF A=N9 THEN 6000
90 ? CHR$(253);:GOTO 70
100 ? CHR$(125);"                    ENTE
R"
110 Z=10:O=N0:LN$="":X=N2:Y=N5:POSITIO
N X,Y:? "TITLE: ":X1=10:X2=38:ENT=N1:T
EMP$="#":LE=29:GOTO 200
120 O=N0:LN$="":Y=N6:POSITION X,Y:? "A
UTHOR: ":X1=14:X2=25:TEMP$="@":LE=12:Z
=14:GOTO 200
130 O=N0:LN$="":Y=N7:POSITION X,Y:? "D
IVISION: ":X1=14:X2=25:TEMP$="!"
132 IF EDIT=N0 THEN POSITION N0,20:? "
DIVISIONS:";DIV$
135 LE=12:Z=X1:GOTO 200
140 O=N0:LN$="":Y=N8:POSITION X,Y:? "C
ATEGORY: ":X1=14:X2=25:TEMP$="%":LE=12
:Z=X1:GOTO 200
150 O=N0:LN$="":Y=N9:POSITION X,Y:? "L
OCATION: ":X1=14:X2=28:TEMP$="*":LE=15
:Z=X1:GOTO 200
```

```
160 RN=RN+N1:GOTO MENU
200 FOR ZZ=X1 TO X2:POSITION ZZ,Y:? "-
":NEXT ZZ
210 POSITION Z+0,Y:GET #N3,W:GOSUB 100
0:IF Q=N1 THEN Q=N0:GOTO 100+ENT*10
220 IF XX=155 THEN 250
230 LN$(LEN(LN$)+N1)=CHR$(XX):IF LEN(L
N$)>LE THEN GOSUB 300:GOTO 100+10*ENT
240 GOTO 210
250 IF LEN(LN$)<LE THEN LN$(LEN(LN$)+N
1)=" ":GOTO 250
260 IF EDIT THEN RETURN
270 TEMP$(N2)=LN$:LN$=TEMP$
280 FILE$(LEN(FILE$)+N1)=LN$:ENT=ENT+N
1:GOTO 100+ENT*10
300 ? CHR$(253):FOR ZZ=N1 TO N4:POSITI
ON X,Y:? "
          ";:FOR D=N1 TO 30:NEXT D
310 POSITION X,Y:? "ITEM TOO LONG!  ST
AY WITHIN DASHES!";:FOR D=N1 TO 100:NE
XT D:NEXT ZZ:POSITION X,Y
320 ? "
          ";:RETURN
400 EDIT=N1:GOSUB 2500:GOSUB 1500:TEMP
1$=" ":TEMP1$(N85)=" ":TEMP1$(N2)=TEMP
1$
410 POSITION N4,15:? "1 TITLE        2
 AUTHOR":POSITION N4,16:? "3 DIVISION
   4 CATEGORY":POSITION N4,17
420 ? "5 LOCATION":POSITION N4,21:? "S
 SAVE as shown":POSITION N4,20:? "E EX
IT":TEMP1$=FILE$(N85*I-84,N85*I)
430 GET #N2,K:K=K-48:ENT=K:IF K=N1 THE
N GOSUB 110:TEMP1$(N2,30)=LN$
440 IF K=N2 THEN GOSUB 120:TEMP1$(32,4
3)=LN$
450 IF K=N3 THEN GOSUB 130:TEMP1$(45,5
6)=LN$
460 IF K=N4 THEN GOSUB 140:TEMP1$(58,6
9)=LN$
470 IF K=N5 THEN GOSUB 150:TEMP1$(71,N
85)=LN$
485 IF K=35 THEN FILE$(N85*I-84,N85*I)
=TEMP1$:GOTO MENU
487 IF K=21 THEN GOTO MENU
490 GOTO 430
500 ? CHR$(125):? " title        autho
r      subject"
510 FOR I=N1 TO RN:? FILE$(I*N85-83,I*
N85-55):? "            ";:? FILE$(I
*N85-53,I*N85-42):? " ";
520 ? FILE$(I*N85-40,I*N85-29);:IF PEE
K(84)>21 THEN GOSUB 700:POSITION 0,1:F
OR J=1 TO 23:? CHR$(156);:NEXT J
530 NEXT I
540 GOSUB 700:GOTO MENU
700 POSITION N4,23:? "hit any key when
 ready";:GET #N2,D:RETURN
1000 POSITION Z+0,Y:? CHR$(W)
1004 IF PEEK(764)=255 THEN POSITION Z+
```

```
0,Y:? " ":GOTO 1000
1006 GET #N2,XX:IF XX=126 THEN Q=N1:RE
TURN
1010 POSITION Z+0,Y:? CHR$(XX):POKE 76
4,255:Q=Q+N1:RETURN
1400 EDIT=N1:GOSUB 2500
1500 ? CHR$(125);"              E
DIT"
1502 IF S=N3 THEN ? CHR$(125);"
          VIEW"
1505 POSITION N2,N5:? "TITLE:   ";:? FI
LE$(N85*I-83,N85*I-55)
1510 POSITION N2,N6:? "AUTHOR:     ";:
? FILE$(N85*I-53,N85*I-42)
1520 POSITION N2,N7:? "DIVISION:   ";:
? FILE$(N85*I-40,N85*I-29)
1530 POSITION N2,N8:? "CATEGORY:   ";:
? FILE$(N85*I-27,N85*I-16)
1540 POSITION N2,N9:? "LOCATION:   ";:
? FILE$(N85*I-14,N85*I):POSITION 10,22
:? "START FOR MENU":RETURN
2000 ? CHR$(125);"            SORT"
2010 POSITION N3,N3:? "Sort by"
2020 POSITION N5,N5:? "1  TITLE"
2030 POSITION N5,7:? "2  AUTHOR"
2040 POSITION N5,9:? "3  DIVISION"
2060 GET #N2,A:A=A-48
2061 IF A=N1 THEN 2070
2063 IF A=N2 THEN 2080
2065 IF A=N3 THEN 2090
2067 GOTO 2000
2070 A=USR(ADR(SORT$),ADR(FILE$),N85,R
N,N2,19,N0,32,12,N0):GOTO MENU
2080 A=USR(ADR(SORT$),ADR(FILE$),N85,R
N,32,12,N0,N2,19,N0):GOTO MENU
2090 A=USR(ADR(SORT$),ADR(FILE$),N85,R
N,45,12,N0,56,12,N0,N2,19,N0):GOTO MEN
U
2500 ? CHR$(125);"            SEARC
H":FLAG=N0
2505 IF EDIT THEN ? CHR$(28);"
          EDIT"
2510 POSITION N2,N2:? "DO YOU WISH TO:
"
2520 POSITION N5,N4:? "1  SEARCH ON TI
TLE"
2525 POSITION N5,N5:? "2  SEARCH ON AU
THOR"
2530 POSITION N5,N6:? "3  SEARCH ON DI
VISION"
2540 POSITION N5,N7:? "4  SEARCH ON CA
TEGORY"
2550 GET #N2,A:A=A-48
2560 IF A=N1 THEN ? :? "ENTER TITLE :
";:SEARCH$="$"
2570 IF A=N2 THEN ? :? "ENTER AUTHOR "
;:SEARCH$="@"
2580 IF A=N3 THEN ? :? "ENTER DIVISION
 ";:SEARCH$="!"
2590 IF A=N4 THEN ? :? "ENTER CATEGORY
```

```
                   ";:SEARCH$="X"
2595 IF A=N5 THEN ? :? "ENTER LOCATION
     ";:SEARCH$="x"
2600 IF A<N1 OR A>N5 THEN 2500
2605 INPUT TEMP$:SEARCH$(N2)=TEMP$:A1=
N1
2610 LY=LEN(FILE$):LX=LEN(SEARCH$):POK
E 207,LX-N1
2625 D=LY-LX-A1+N3
2627 IF I=RN THEN ? FILE$(I*N85-83,I*N
85-55):GOTO 2715
2630 AA=USR(ADR(SS$),ADR(FILE$(A1)),AD
R(SEARCH$),B)
2640 IF AA=N0 AND A1=N1 THEN ? :? SEAR
CH$(N2);CHR$(253);" NOT FOUND!":FOR J=
N1 TO 500:NEXT J:IF SS THEN RETURN
2645 IF AA=N0 AND A1=N1 THEN GOTO MENU
2647 IF SS THEN RETURN
2650 IF FLAG=N1 AND AA<>N0 THEN GOTO 2
700
2660 IF AA=N0 THEN FLAG=N0:GOTO 2700
2665 IF A1=N1 THEN ? :? " TITLE :";:PO
SITION 25,23:? "START FOR MENU";:POSIT
ION N9,11
2670 I=INT((AA+A1)/N85)+N1:A1=I*N85:FL
AG=N1:GOTO 2625
2700 ? FILE$(I*N85-83,I*N85-55):Y=PEEK
(84)
2710 IF FLAG<>N0 THEN POSITION N3,23:?
     "SELECT FOR MORE";:POSITION N0,Y:FLAG
=N0
2715 POSITION 25,22:? "OPTION VIEW";
2720 S=PEEK(53279):IF S=N6 THEN GOTO M
ENU
2725 IF S=N3 THEN GOSUB 1500
2730 IF S=N5 THEN POSITION N3,23:? "
                    ";:POSITION N9,Y:GOTO
2625
2735 IF EDIT THEN RETURN
2740 GOTO 2720
3000 ? CHR$(125);"   INSERT TAPE - PRE
SS RETURN":? :? :OPEN #N1,N8,N0,"C:":?
     " SAVING DATA...PLEASE WAIT":? #N1;RN
3005 CLOSE #N1:POKE 764,32:OPEN #N1,N8
,255,"C:":? #N1;FILE$:CLOSE #N1:GOTO M
ENU
3500 ? CHR$(125);"            DELE
TE":? :?
3510 A=N1:SS=N1:GOSUB 2560:IF AA<>N0 T
HEN I=INT((A+AA)/N85)+N1:? :? FILE$(N8
5*I-83,N85*I-55)
3515 IF AA=N0 THEN GOTO MENU
3520 ? " PRESS Y TO DELETE THIS ENTRY
":GET #N2,B
3530 IF B=89 THEN IF I<>RN THEN FILE$(
N85*I-84)=FILE$(N85*(I+1)-84):RN=RN-N1
:GOTO 3560
3540 IF B=89 THEN IF I=RN THEN FILE$(N
85*I-84)="":RN=RN-N1:GOTO 3560
3550 ? "ENTRY NOT DELETED":FOR J=N1 TO
```

```
200:NEXT J
3560 SS=N0:GOTO MENU
5500 ? CHR$(125);"  PREPARE DATA TAPE
- PRESS RETURN":? :?
5510 OPEN #N1,N4,N0,"C:":? "LOADING DA
TA...PLEASE WAIT":INPUT #N1,RN:CLOSE #
N1
5530 FILE$(N1)=" ":FILE$(RN*N85)=" ":F
ILE$(N2)=FILE$
5540 POKE 203,ADR(FILE$)-(INT(ADR(FILE
$)/256)*256):POKE 204,INT(ADR(FILE$)/2
56)
5570 TRAP 5700
5580 POKE 764,32:OPEN #N1,N4,255,"C:":
POKE 764,255:CNT=N0
5590 FOR I=N0 TO RN*N85 STEP 128
5600 GET #N1,D:CNT=CNT+128
5620 X=USR(1536)
5640 NEXT I
5700 CLOSE #N1:FILE$=FILE$(N1,RN*N85):
TRAP 40000:GOTO MENU
6000 ? CHR$(125);"   HAVE YOU SAVED Y
OUR DATA?":? :? :? "   TYPE 'S' TO S
AVE DATA":? :? "         'Q' TO QUIT"
6010 GET #N2,A:IF CHR$(A)="S" THEN GOS
UB 3000
6020 IF CHR$(A)="Q" THEN ? CHR$(125):E
ND
6030 ? CHR$(253):GOTO 6010
20000 N0=0:N1=1:N2=N1+N1:N3=N2+N1:N4=N
3+N1:N5=N4+N1:N6=N5+N1:N7=N6+N1:N8=N4+
N4:N9=N4+N5:N85=85:MENU=50
20001 GRAPHICS N2:POSITION N5,N2:? #6;
"catalogue":POSITION N9,N4:? #N6;"DY":
POSITION N3,N6:? #N6;"peter bamford"
20002 POKE 752,N1:SETCOLOR N2,N0,N0:?
"  Reading DATA. Please stand by."
20005 DIM SORT$(182):FOR I=N1 TO 182:R
EAD D:SORT$(I,I)=CHR$(D):NEXT I
20010 DATA 216,104,56,233,3,133,217,10
4,133,204,104,133,203,104,133,215,104,
133,214,104,133,210,104,133,209,162
20012 DATA 0,104,104,157,0,1,232,228,2
17,208,246,56,165,209,233,2,133,209,16
5,210,233,0,133,210,48,108
20014 DATA 165,209,133,211,165,210,133
,212,165,204,133,206,133,208,165,203,1
33,205,24,101,214,133,207,165,208,101
20016 DATA 215,133,208,160,0,185,0,1,1
90,2,1,134,218,198,1,1,200,200,200,132
,216,168,136,177,205,209
20017 DATA 207,240,12,165,218,208,4,14
4,16,176,46,144,44,176,10,200,202,208,
234,164,216,196,217,208,210,198
20018 DATA 211,169,255,197,211,208,6,1
66,212,240,11,198,212,165,208,133,206,
165,207,24,144,172,165,213,240,4
20019 DATA 134,213,208,140,96,134,213,
160,0,177,205,170,177,207,145,205,138,
145,207,200,196,214,208,241,240,203
```

```
20100 DIM SS$(92):FOR I=N1 TO 92:READ        ,A:NEXT I
B:SS$(I,I)=CHR$(B):NEXT I                22010 DATA 104,174,138,2,134,61,160,0,
20102 DATA 104,104,133,204,104,133,203   162,0,185,0,4,129,203,200,230,203,208,
,104,133,206,104,133,205,104,141,222,6   2,230,204,196,61,240,3,76,10,6,96
,104,141,221,6,169,1,133,212,169         22030 DIM LN$(30),DIV$(100),TEMP$(30),
20104 DATA 0,133,213,160,255,200,177,2    TEMP1$(N05),SEARCH$(30):OPEN #N3,N4,N0
03,209,205,240,40,24,165,203,105,1,133    ,"S:":OPEN #N2,N4,N0,"K:"
,203,165,204,105,0,133,204,24            22040 RNMAX=INT((FRE(0)-280)/N05)+N1:D
20106 DATA 165,212,105,1,133,212,165,2   IM FILE$(RNMAX*N05):POKE 752,N1:POKE 0
13,105,0,133,213,205,222,6,208,216,165   2,N0:FILE$=""
,212,205,221,6,208,209,240,7             22050 DIV$=" FICTION SPORT OUTDOORS CO
20108 DATA 152,197,207,208,204,240,6,1    MICSHOUSE MAGAZINES COMPUTING BUSINESS
69,0,133,212,133,213,96                       SCIENCE ENGINEERING AVIATION"
22000 FOR I=1536 TO 1565:READ A:POKE I   22060 RETURN
```

* * *

BOOK REVIEWS

Exercises for the ATARI

Reviewed by Barry Williams

This book was written by J.P. Lamoitier, a FORTRAN and BASIC teacher in the U.S.A. After having looked through it, I am very pleased with what it achieves. All the exercises will run on the 1200XL, the 800 "deluxe" and the 400 "economy" model. This book will take you through a number of areas that may have seemed rather vague in the past. The exercises and programs consist of:
- compute taxes
- calculate the rate of growth
- average measure
- calculate mean, variance and standard deviation
- mortgage annuities
- data processing
- games

This publication can be obtained at most book shops. A copy has been sent to the A.C.E.(N.S.W.) Library, for which our sincere thanks go to Shirley Malcolm of A.N.Z. Book Co. Pty. Ltd.

Computers For Everybody

Reviewed by Barry Williams

The second book which was sent for review was "Computers For Everybody" by Jerry Willis & Merl Miller. It is the second edition and has been released in Australia by A.N.Z. Book Co. It covers most of the personal computers on the market in Australia and helps to explain their differences, capablities and most importantly, details software packages which are available. If you are new to micros, then this book will assist in whatever purchase you make. [...and if it's not an ATARI, you must have rocks in your head! -- GF]

* * *

THE MILLION DOLLAR QUESTION

What is the one article or program that you would most want to see in INSIDE INFO over and above anything else? Please send your answers to The Editor, A.C.E.(N.S.W.), G.P.O. Box 4514, Sydney, N.S.W. 2001. Give a brief description if necessary.

COMPUTER GRAPHICS - SOME REMARKS

by T.A. Lister

General

These notes do not assume any particular type or brand of computer, nor any particular features or limitations. It is assumed that there are (and always will be) limitations to any type of computer and that the following applications will use sensible compomises where necessary.

Types of Application

The author has been required to develop graphics programs of many types and has taken a keen interest in the field. This has led him to appreciate the possibilities in practical terms rather than theoretical ones. This brief overview can by no means be thought of as complete.

Broadly speaking, there are 3 main types of graphic applications:

1. ARTISTIC graphics are those which are a collection of effects designed to entertain or instruct the viewer. A good example would be the use of graphics for advertising. This type of graphics is more related to commercial art than anything else, since the graphic layouts dominate and the computer is seen as a gross limitation on one's artistic abilities - or at least a challenge to them.

2. ENGINEERING graphics are those which allow the user to define a very precise model in three dimensions. This model may be viewed from any orientation and plotted accurately on a flat-bed plotter. Architects are becoming users of systems where they can design a building and then take a "walk" through it, perhaps stopping to look at particular views of interest. This type of system is usually implemented on large, fast computers because of the massive computational overheads in presenting realistic views. This includes removing hidden lines, hidden surfaces and hidden bodies. Other high overhead tasks are perspective projection, "clipping" pieces not in the viewer's "window", rotating, scaling and concatenation of objects. The complex and sophisticated images prepared by these methods are often cost effective ways of preparing designs, but are not intended to provide animated effects - although some very powerful computers are fast enough for this purpose.

3. ANIMATED graphics are used where real time interaction with the user is desired. This may even include passive interaction, such as watching a cartoon prepared by computer. Much more interesting than this is the field of computer games. While these games do have rules for their actions, these do not necessarily correspond to the Laws of Physics or indeed to any recognised principles. The designer of such a game is creating a "universe" with its own "Laws", its own methods of judging the quality of a user's play and a limited, but effective visual (and often aural) presentation of the situation. The display is often symbolic rather than realistic and the problems of engineering graphics are simply not relevant.

Methods of Presentation

With engineering models, by far the biggest overhead is removal of hidden lines. This is so time consuming that many systems do not bother to remove hidden lines at all. Those that do usually provide it only as an extra option. Experience with "wire frame" models indicates that regular users soon grow accustomed to seeing the "hidden" lines and are not confused by them. However this is not acceptable when demonstrating a design to a non-expert, such as an architect's client viewing his new house design for the first time. The architect needs to take his client on a "guided tour" of the house. Naturally the perspective must be correct and all hidden lines removed. The way to do this is for the architect to set up a tour by entering a recording mode. This "remembers" the various views in the order that the architect requires them and moves quickly through the wire frame model. It may also be told where to pause for a good look around. This sequence of actions is recorded in a file, and can be replayed and edited at will. When the architect is happy with the tour, he can request the production of a "movie" from this file with all hidden lines removed. Since the "script"

has already been approved, the "shooting" of the movie can take place without supervision and thus without wasting the architect's valuable time. The movie is merely a series of lines recorded on file that can be played at any speed, forwards or backwards. If the concept of a "decision node" is introduced, then it becomes possible to have the client select different pathways at a number of different points. This gives the client the ability to wander around the building at will. Of course, if a plotter is connected, "snapshots" can be taken wherever necessary.

The next example to consider is that of cartoons, where some of the objects within the scene alter position, shape, size, colour or any other attributes. From the previous example, it is clear that if a scene can be adequately modelled at all, it can be presented in computer graphics. In this case, rather than a flat-bed plotter, one would use a computer controlled video tape recorder to take each "snapshot". The snapshots must be taken at fixed time intervals to give the illusion of smooth motion upon replay. The problem here is that the scene cannot be adequately described using lines to build wire frames. To see why this is so, consider the following (rough) definition of a typical cartoon:

- Each scene has perspective. An outdoor scene may have a number of "planes of action" set at different distances from the viewer. For example, the furthest plane may be a row of distant mountains with a middle distance plane where trees sway in the wind and a foreground plane where a man rides a bicycle from left to right along a road. The point of view follows the man, so that he stays in centre screen. As he moves, the middle distance plane should also move, but to a lesser extent. The exact amount depends on how far away the middle distance plane is supposed to be. Many of the early hand drawn cartoons have three, four or five planes of action. The author has seen one with seven! Modern cartoons often have only one, which makes them rather boring. An indoor scene requires accurate use of perspective rather than planes of action, as the distances involved are much shorter.

-- Each object within the scene must be defined in multiple dimensions. These include the 3 physical dimensions as well as time, colour, texture, flexibility and any other attributes the designer needs to satisfactorily describe his ideas. For example, an object may be considered as a volume of space bounded by opaque surfaces. Each surface, or even some portion of a surface, may be defined by colour, flexibility, texture and so on. Surfaces join at edges and are delimited by them, even where the edge delimits a set of functional attributes, rather than visual ones. A reasonable rule for flexible objects is that they maintain a constant volume unless the object's attributes specifically state otherwise. This allows a man to bend his elbow without his arm collapsing.

Conclusion
Much research remains to be done in the field of computer graphics. As power for money increases with new developments in computer technology, more people will take up the option to become a "god" and create their own "universe".

Let there be light!

* * *

RIVALRY WITH A DIFFERENCE

I picked up this interesting little snippet in the March 1983 issue of Australian Personal Computer. I hope they don't mind me repeating it here.
"Erstwhile APC contributor David Tebbutt was helpless with laughter recently in the gents' in ATARI HQ. Each, er, location sported an Apple logo 'right where you aim'."

ATARI DIGITAL CLOCK

by Geoff Ashworth

This program is designed for beginners to demonstrate how your ATARI computer can tell you the time. All you have to do after loading the program is to input the hour and minute and press the START key at the zero second.

If your clock is running fast or slow, then calibrate it by changing the delay figure in line 170. It may take you several attempts to get your clock running accurately. If you make any alterations to the program, you may find that the clock's accuracy will change.

```
1 REM #############################
2 REM #     ATARI DIGITAL CLOCK    #
3 REM #      by Geoff Ashworth      #
4 REM # Published by Atari Computer #
5 REM #     Enthusiasts (N.S.W.)    #
6 REM #          August 1983        #
7 REM #############################
10 GRAPHICS 2:SETCOLOR 2,0,0:POSITION
2,0:? #6;"INPUT:"
20 POSITION 2,1:? #6;"HOUR (1 TO 12)";
:INPUT H:IF H=0 THEN H=12
30 POSITION 2,3:? #6;"MINUTE (1 TO 59)
";:INPUT M:S=0
40 POSITION 0,6:? #6;"PRESS start TO B
EGIN"
50 IF PEEK(53279)<>6 THEN 50
60 ? #6;CHR$(125):POSITION 7,8:? #6;"a
tari":POSITION 3,9:? #6;"digital clock
"
70 IF H>9 THEN POSITION 6,4:? #6;H;":"
80 IF H<10 THEN POSITION 6,4:? #6;" ";
H;":"
90 IF M>9 THEN POSITION 9,4:? #6;M;" "
100 IF M<10 THEN POSITION 9,4:? #6;"0"
;M;" "
110 IF S>9 THEN POSITION 12,4:? #6;S
120 IF S<10 THEN POSITION 12,4:? #6;"0
";S
130 S=S+1
140 IF S>59 THEN M=M+1:S=0
150 IF M>59 THEN H=H+1:M=0
160 IF H>12 THEN H=1
170 FOR DELAY=1 TO 315:NEXT DELAY
180 GOTO 70
```

* * *

SECRETS IN ATARI GAMES -- MINER 2049er

by Garry Francis

I have no doubt that many of our members would have bought MINER 2049er using Computer Wave's irresistable offer of $20 off the normal price. I know I did! Great game huh?

A friend rang me up last night (he'd also just bought "Miner") and said that he couldn't get past Station 4. I said "How would you like to see what the other levels look like?". He said "Yeah? I'll do anything to get past level 4!". I hinted a sign of desperation in his voice, so I said "TOUGH! You'll have to do it the hard way.". He then threatened to immediately come around and rearrange some of my anatomy. I could hear him slobbering at the other end of the 'phone. He was obviously mad!! I decided that my life was too valuable to risk and told him my secret. Just for the record, here it is (Bill Hogue will hate me for it):

1. Press START to begin the game.

2. When the graphics for Station 1 are on the screen, move Bounty Bob onto the first framework where he's out of harm's way from the mutant organism patrolling the bottom of the screen.

3. Type in the following combination... 2137826861 (it's the 'phone number of Big Five Software).

4. Press SHIFT and whatever level you wish to go to. You can do this at any point during the game - you don't have to type the 'phone number again unless you press SYSTEM RESET. For a real blast, press SHIFT 0 to go to Station 10.

GRAPHICS IN TEAM ATARI FORTH
By JOHN MATTES

This is, I hope, the first of a regular series of articles for those of you who have the "Team ATARI" version of fig-FORTH. This is now available from the software exchange.

The graphics "words" in the Team ATARI vocabulary are defined in Screen # 34 of the disk. These are almost identical to the graphics commands used in Basic. Specifically, the commands GRAPHICS (GR.), POSITION (POS.), COLOR (C.), PLOT (PL.), SETCOLOR (SE.) and DRAWTO (DR.) all have the same effect and use the same number of arguments as the equivalent BASIC commands. Of course, the arguments must be placed on the stack before using the command.

Other commands which are similar to the BASIC command with the same name are:

LOCATE (LOC.)   XY---n
                      Retrieves the character from the screen at column X and row Y, the character is left on the stack as n.

XIO18   n---
                      Fills an area of the screen between plotted points and lines with the colour data specified by n

You will see that LOC. and XIO18 have the same effect as the BASIC commands but some of the (unnecessary) arguments are missing. Note that XIO does not (in FORTH) have a blank before the 18.

A graphics demonstration program called ESCAPE was described in INSIDE INFO No. 6. This was written using the APX fig-FORTH graphics commands, which are a little different to those used by Team ATARI. If you want to modify the listing published in INSIDE INFO No. 6 to run with your Team ATARI disk:

1.   Add "1 C. DX" to the end of line 3 of screen # 37.
2.   In the definition of BOX, delete the 5 occurrences of "C @" and change the 4 occurrences of "DRAW" to read "DRAWTO".
3.   Change line 11 of screen # 38 to read:
                             C @ C. LOOP RUN ;
4.   Put ";S" on line 14.

Due to a printer problem, "greater than" symbols were omitted from line 15 of screen # 37 (to make the "next-screen" symbol) and from between the "8" and the "IF" on line 10 of screen # 38.

Several users of the Team ATARI disk have pointed out that the word "FORGET" crashes the system. Many thanks to Sean Quinlan for pointing out the solution, which is to change byte 2617 (HEX) by typing: 12 2617 C!

After doing this, type DECOMP FORGET. You should see (at the end):

```
      —
      —
      —
  2612   OBRANCH TO 2606
  2616   SWAP
  2618   !
      —
      —
```

You can now SAVE the corrected code, which should permanently eliminate the problem.

THORN EMI SOFTWARE REVIEWS

As mentioned in the Show Report in Issue No.6, THORN EMI is releasing their range of computer games in Australia. I believe they have had trouble finding a distributor and are going to do it themselves. We'll have to wait and see. In the meantime, they were kind enough to give us some review copies.

There are 4 cartridges and 15 cassettes in the range so far. I have also seen a couple of new cartridges advertised in the States. They are "Save The Seven Seas" and "Orc Attack". All run in 16k, have good to very good graphics and some very nice music. All programs come well packaged in a moulded plastic box which contains the reliably loading cassette (or cartridge) and documentation. The outside of the box has a summary of the program with its system requirements.

Our reviewers generally found that the games lacked "staying power" and most suffered from bad instructions. This is a common complaint with lots of computer games, but I think the THORN EMI range stands up well to some of the trash released in the States. The final evaluation will depend on the retail price, which is unknown at present.

— Garry Francis

* * *

SUBMARINE COMMANDER

Reviewed by Peter Bamford

Submarine Commander is a simulation of tactical warfare with <u>you</u> as the submarine commander. You must find, intercept and destroy enemy shipping.

The game has three screens – an area map, showing locations of you and the shipping; an instrument panel with sonar screen; and a periscope view for use near the surface. Unfortunately, the review game did not have instructions, so I can't offer any comment on them. Their absence made evaluation difficult. The game is a reasonably good simulation with most events happening within the appropriate time scale and not speeded up for arcade effects. A game takes at least 30 minutes to play and requires tactical planning to succeed. The joystick is used to control direction and depth, with the button firing torpedoes. Keyboard controls cover the different screens, speed, crash dives and rapid surfacing. From the instrument panel, you must monitor your fuel, air, battery and torpedo usage during the game and plan accordingly. The graphics are good and add to the game's playability. There are multiple skill levels, with the game ending if you sink all enemy shipping or you are sunk yourself! Oh yes, the enemy attacks and you must take evasive action or risk being sunk.

Overall, the game is reasonably challenging and enjoyable to play and is a good simulation. It makes good use of sound and graphics and the ATARI's special features. It's available only on cartridge.

* * *

SNOOKER & BILLIARDS

Reviewed by A. Manrique

Snooker is a very good replica of the real game. When the game starts, you must select either PRACTICE or SNOOKER. A word of warning! Don't press OPTION during practice mode, as this will cause the program to crash!! The game itself is sensitive, in fact it is too sensitive, as the slightest degree left or right may send your cue ball into a pocket. The balls are hit around the screen by manouvering a cross. The cross is a bit hard to align as the slightest tilt of the joystick sends it whizzing across the screen. Force is controlled by a continuously moving force scale. The game is very hard to play on a black and white TV as it is hard to distinguish between coloured balls. The instructions are poor.

Billiards is almost an exact copy of Snooker except for the different rules. I have never

played billiards, so I cannot really comment on the scoring and rules. I was not able to learn much with the instructions provided.

* * *

DARTS

Reviewed by Jeff Maddock

Darts is an excellent game to play. I have enjoyed playing this game and I think I always will. The game is as good as a real game of darts. If you haven't played darts before, then this game will show you how.

There can be 1 to 4 players or 1 to 3 players plus the computer. Skill levels for the players are from 0 (easy) to 9 (hard). The computer has separate skill levels -- again from 0 to 9. The player can set both skill levels at the start of the game. The game is played with one joystick. All players have to use the same joystick and this is the only gripe I have against the game. THORN EMI did not take advantage of the ATARI's four joystick ports.

On a scale of 1 to 10, I'd rate this game an 8.

[One thing Jeff didn't mention was how the game is represented on the computer. You are presented with a full screen view of the interior of an old English pub, complete with carpet bowls and an old grandfather clock whose pendulum actually swings! The player is represented by the rear view of a man who faces a dart board on the far wall. An enlargement of the dart board is shown in the bottom right hand quarter of the screen with the player's hand superimposed over the board. You can move this hand with the joystick until the dart is positioned to your satisfaction, then push the fire button. The large figure of the player then throws the dart and it sails across the room and (hopefully) sticks in the dart board. I say "hopefully", because it quite frequently hits a wire and bounces off. The ping of the dart hitting the wire would have to be the most realistic sound I've ever heard in any computer game. Does it sound easy so far? Ho ho! I've left out the tricky bit! In skill level 0, the hand superimposed over the dart board moves wherever you want it to. As the difficulty gets higher, the hand takes on more and more of a life of its own and wanders away from where you want it to go -- just like in real life. By skill level 9, any relationship between the hand and the movements of the joystick is purely coincidental! Darts is a great party game. Try it. You'll like it. -- GT]

* * *

BRITISH HERITAGE JIGSAW PUZZLES VOL.1

Reviewed by John Damen

These are jigsaw puzzle games (2 puzzles on cassette with the Tower of London on one side and the Tower Bridge on the other) for older children and adults. The player selects the piece size from 1 to 8 (level 1 being quite a large piece and 8 being quite small). At lower levels, a player cannot place a piece unless it is in the correct position, whereas at higher levels, pieces can be placed anywhere on the screen.

The game starts by selecting a level, then the picture is displayed until the player feels he or she knows it well enough to proceed. On pressing the OPTION key, the screen clears, then by pressing "T" or "B", the pieces scroll across a yellow star at the top or bottom of the screen respectively. When a piece stops over the star, it can be placed by moving the cursor to the desired position with the joystick.

The presentation, graphics and music are of a very high standard and the puzzle is easy and quite fun to assemble the first few times, but after that, there is a loss of interest in the game. In all, I feel these programmes have limited appeal and it seems to me to be a very expensive way to assemble a puzzle.

* * *

BRITISH HERITAGE JIGSAW PUZZLES VOL.II

Reviewed by Tony Reeve

If you like doing jigsaw puzzles, but don't like picking up the pieces when it's finished, then computer puzzles are for you. Never another lost piece, or the problem of where to store one that is half finished.

There are two puzzles. One side of the auto boot cassette has Windsor Castle, the other side has Anne Hathaway's Cottage. One major difference in doing this jigsaw is that you only see the picture at the start. After that, it's all from memory (yours, that is). Eight puzzle sizes are available, giving a range of 25 to 64 pieces. The problem of which piece to pick up next is solved very well by the computer scrolling 3 pieces across the top (or bottom) of the screen. One of the three is selected and positioned by using the joystick. In options 1 to 4, the computer won't allow incorrect placement of pieces, but it does in options 5 to 8.

In summary, even though the graphics and sound are a little coarse, the program implemention is excellent and will appeal to all ages.

***

EUROPEAN SCENE JIGSAW PUZZLES VOL.II

Reviewed by Jamie Athas

These puzzles may not have as many pieces as your favourite 1000 piece monster in wood or cardboard (which I find boring), but they are exciting. They do not need to be stored and you can't lose any pieces, which happens a lot with those 1000 piece puzzles.

There is a different puzzle on each side of the cassette -- The Parthenon, Athens and a Bavarian Castle, Germany. The graphics are not superb. The pictures look like something out of a cartoon, as they are in GRAPHICS 7 and use only 4 colours, but don't let that put you off.

After the program loads, the theme music begins and "GAME OPTION" appears. You may type 1 to 8. Options 1 to 4 give you a 5x5 (25 piece) to 8x8 (64 piece) puzzle and the computer accepts and places the pieces of the puzzle only if they're in the correct position. Options 5 to 8 are similar except that the computer will place the piece whether it's in the correct position or not. Press "T" to display the unused pieces across the top of the screen or "B" to display them across the bottom. Use a joystick to place the cursor where you think the piece should go, then press the trigger. If you finish the puzzle, the computer will reward you with some music (which sounds really good).

***

HICKORY DICKORY DOCK & BAA BAA BLACK SHEEP

Reviewed by Tony Reeve

This is a change from the shoot 'em up and maze games that are so popular today. It is billed as entertainment and educational for pre-school to adults. The program displays one of two pictures, depending on which side of the auto boot cassette has been loaded, then after options are selected, the computer divides the picture into squares and mixes them up. The degree of mixing depends on which of the six levels of difficulty are selected. After the music stops, the task is to re-assemble the picture correctly by using the joystick. It's not as easy as it sounds because you can only slide the squares into one vacant slot, just like the 1 to 15 number slide puzzles that have been around for years. Once the 9 square picture has been mastered, you can go on to 16, 25 or 36 squares. When the picture is complete, the tune for the particular nursery rhyme is played.

In summary, I think the program has good graphics, sound and human engineering and would

mostly apply to 5 to 10 year olds. The documentation needs to be read carefully, however it is sufficient.

<center>* * *</center>

HUMPTY DUMPTY & JACK AND JILL

<center>Reviewed by John Damen</center>

These are puzzle games on cassette for young children, with Humpty Dumpty on one side and Jack and Jill on the other. The picture on the screen is divided into squares and the computer jumbles up the pieces in a random fashion. The player has a choice of four sizes from 9 to 36 pieces and 6 levels of difficulty, so there are a total of 24 variations per puzzle.

The graphics and music for both puzzles are of a high standard and the moving of the pieces around the screen is very easily done by using the joystick. Both games are good fun to play. They hold the player's interest for quite some time, but there is a rapid loss of interest after they've been played a few times. My 5 year old son and his 7 year old cousin, after mastering both games at level 4, skill 4 in two sittings, haven't asked to play them since. The same feeling was expressed by adults after playing a few times.

It is felt that even though at level 6, skill 6 it is like working on a Rubik's cube, it is still basically just a puzzle and again it seems like an expensive way to assemble a puzzle.

<center>* * *</center>

# OWARI & BULL AND COW

<center>Reviewed by A. Manrique</center>

I've had these games for nearly a month and still haven't worked out the instructions for Owari yet. The instructions included are, in a word, HOPELESS. Owari is for 1 or 2 players and has many options. The sounds are limited and the graphics aren't very thrilling. It is also slow, as the computer analyses EVERY move it can make. The game can be played on a black and white TV quite easily.

Bull and Cow is just a copy of the popular Mastermind. The instructions are slightly better than those of Owari. The game is played by choosing a colour and placing it in the grid. This is done by either joystick or keyboard. Even with all the options and selections, the top level is still a bit easy for my liking, but the timer at the top of the screen helps make it a challenge by trying to better your own time. It is practically impossible to play on a black and white TV. Despite it's flaws, this is still an enjoyable replica of Mastermind.
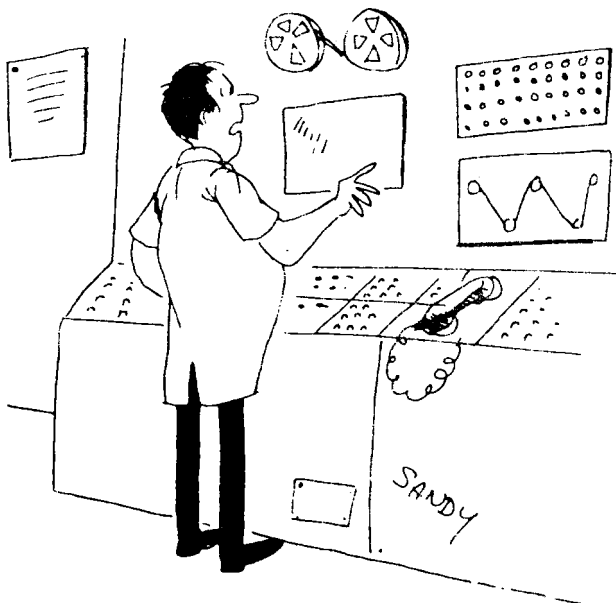
"Now hear this! I am the programmer. You are the programmee!"
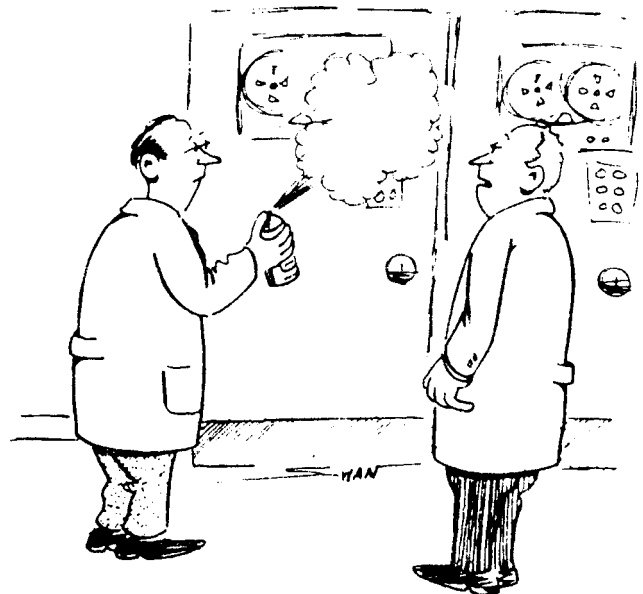
"Where did you learn to debug a program, Haverstraw?"

<center>-15-</center>

SUMS

by J.E. Maddock

There is not much to say about this program. Once you have typed it in, the hardest part is over. Once running, the program is easy to use and understand. I hope the program is of some benefit to members with young children.

```
1 REM ###############################
2 REM #          SUMS              #
3 REM #      by Jeff Maddock        #
4 REM # Published by Atari Computer #
5 REM #   Enthusiasts (N.S.W.)      #
6 REM #       August 1983           #
7 REM ###############################
10 GOSUB 630
20 POKE 752,1:? CHR$(125);:Z=0:GOTO SU
MS
30 POSITION 6,1:? #6;"ADDITION"
40 X=INT(RND(0)*20)
50 Y=INT(RND(0)*20)
60 POSITION 6,4:? #6;X;"+";Y;"="
70 OPEN #1,4,0,"K:"
80 TRAP 80:POKE 764,255:INPUT #1,A:TRA
P 40000:CLOSE #1
90 POSITION 6,4:? #6;X;"+";Y;"=";A
100 IF A=X+Y THEN GOSUB 390:GOTO 40
110 GOSUB 480:POSITION 6,4:? #6;X;"+";
Y;"=";X+Y;"    "
120 GOSUB 330:GOTO 40
130 POSITION 5,1:? #6;"SUBTRACTION"
140 X=INT(RND(0)*20)+10
150 Y=INT(RND(0)*10)
160 POSITION 6,4:? #6;X;"-";Y;"="
170 OPEN #1,4,0,"K:"
180 TRAP 180:POKE 764,255:INPUT #1,A:T
RAP 40000:CLOSE #1
190 POSITION 6,4:? #6;X;"-";Y;"=";A
200 IF A=X-Y THEN GOSUB 390:GOTO 140
210 GOSUB 480:POSITION 6,4:? #6;X;"-";
Y;"=";X-Y;"    "
220 GOSUB 330:GOTO 140
230 POSITION 3,1:? #6;"MULTIPLICATION"
240 X=INT(RND(0)*12)
250 Y=INT(RND(0)*12)
260 POSITION 6,4:? #6;X;"x";Y;"="
270 OPEN #1,4,0,"K:"
280 TRAP 280:POKE 764,255:INPUT #1,A:T
RAP 40000:CLOSE #1
290 POSITION 6,4:? #6;X;"x";Y;"=";A
300 IF A=X*Y THEN GOSUB 390:GOTO 240
310 GOSUB 480:POSITION 6,4:? #6;X;"x";
Y;"=";X*Y;"    "
320 GOSUB 330:GOTO 240
330 POSITION 3,6:? #6;"WHOOPS! WRONG!"
340 FOR W=0 TO 800:NEXT W
350 POSITION 6,4:? #6;"           "
360 POSITION 3,6:? #6;"            "
370 Z=Z+1:IF Z=10 THEN GOSUB 510
380 RETURN
390 POSITION 5,6:? #6;"VERY GOOD!"
400 POSITION INT(10-LEN(I$)/2),8:? #6;
I$
410 FOR T=1 TO 4:NTE=105:DUR=2.5:GOSUB
 580:NTE=132:DUR=4.5:GOSUB 580:NEXT T:
SOUND 0,0,0,0
420 FOR W=1 TO 300:NEXT W
430 POSITION 6,4:? #6;"          "
440 POSITION 5,6:? #6;"        "
450 POSITION 0,8:? #6;"
        "
460 Z=Z+1:IF Z=10 THEN GOSUB 510
470 RETURN
480 FOR J=1 TO 3:FOR L=100 TO 10 STEP
-2
490 SOUND 0,L,10,15:NEXT L:NEXT J
500 SOUND 0,0,0,0:RETURN
510 ? "PUSH xOPTIONx TO STOP"
520 ? "PUSH xSELECTx TO CONTINUE"
530 ? "PUSH xSTARTx TO START AGAIN"
540 IF PEEK(53279)=3 THEN GRAPHICS 0:E
ND
550 IF PEEK(53279)=5 THEN ? CHR$(125);
:Z=0:RETURN
560 IF PEEK(53279)=6 THEN POP :GOSUB 7
00:GOTO 20
570 GOTO 540
580 VOL=15:ICR=0.79+DUR/50
590 SOUND 0,NTE,10,VOL
600 VOL=VOL*ICR
610 IF VOL>1 THEN 590
620 RETURN
630 GRAPHICS 2:POKE 712,194:POKE 752,1
:POKE 710,194:DIM I$(20),S$(1)
640 POSITION 3,1:? #6;"multiplication"
650 POSITION 4,3:? #6;"subtraction"
660 POSITION 6,5:? #6;"addition"
670 POSITION 9,7:? #6;"BY"
680 POSITION 4,9:? #6;"J.E. MADDOCK"
690 FOR WAIT=0 TO 1500:NEXT WAIT
700 ? #6;CHR$(125):POKE 764,255:POKE 7
52,0
710 TRAP 710:? CHR$(125);"HELLO! MY NA
ME IS xATARIx!":? "WHAT'S YOUR NAME?";
INPUT I$
720 TRAP 720:? CHR$(125);"WHAT KIND OF
 SUMS WOULD YOU LIKE";I$;"? (x + -)"
:INPUT S$
730 IF S$="+" THEN SUMS=30:RETURN
740 IF S$="-" THEN SUMS=130:RETURN
750 IF S$="x" THEN SUMS=230:RETURN
760 GOTO 720
```

Odds & Sods

A regular column by Garry Francis

THE XL SERIES — ATARI's NEW COMPUTERS

Rumours about the ATARI 600 and 1000 have been floating around ever since I can remember. Well, they've eventually been put to rest. ATARI announced 4 new computers and a whole new range of peripherals at the Consumer Electronics Show in Chicago this June. I've read a number of reports in TIME magazine, ANTIC and various users' group newsletters and all of them are slightly different, so there's obviously still a fair amount of rumour or speculation mixed in with the fact. The most thorough report I've seen was by Ken Smith in the Toronto Atari Programmers' Society Newsletter Vol.1 No.5. It had been reprinted from the Santa Barbara A.C.E. Newsletter, Vol.2 No.3. Ken states that he has ATARI brochures with descriptions and pictures, so it must be fairly accurate. The bulk of his report follows:

"...The four new machines are the 600XL, 800XL, 1400XL and 1450XLD. There is also a new 1050 disk drive with double density capability, using the upcoming DOS III, a 1030 direct connect modem, a 1027 letter quality printer (20 cps), a graphics tablet, track ball and remote control joysticks. The 1027 is also a direct connect printer like the new 1025.

Now about these computers. All have built-in ATARI BASIC (Version B). The 600XL has one cartridge slot and comes with 16k of RAM, and can be upgraded to 64k of RAM. The 800XL is similar to the 600XL but is slightly larger and comes with 64k of RAM. Both of these machines are similar in design to the current 1200XL, but the dimensions are slightly smaller and the single cartridge slot is centred on the top. Both also have full keyboards. The rumoured price of the 600XL is $199 (U.S.).

The 1400XL and 1450XLD have a little more muscle. Both have built-in modem and speech synthesis capability. The 1450XLD has a raised back with built-in double sided, double density disk drive with a slot for a second drive. This disk drive is connected directly to the data bus for faster speed (three times the old drives).

The 1400XL looks very much like the 1200XL (and, hopefully, more compatible). It still remains to be seen how these machines measure up performance wise. I, for one, am ready to jump on a 1450XLD as soon as it becomes available.

For you real computer hackers, ATARI has also announced an ATARI Expansion System peripheral to allow control cards and special peripherals to connect to their computers. And catch this! an ATARI CP/M external microprocessor upgrade to allow CP/M software to be used with every ATARI computer. The 1450XLD is rumoured (sorry about the rumour) to be priced at under $1000..."

The 1025 printer mentioned above is nothing more than a crummy old Microline 80. A better printer to look out for is the new Axiom AT-100. This is not an ATARI brand printer, but it plugs directly into the computer (no interface needed) and costs only $299 in the U.S.!

I believe the entire range of "old" computers and peripherals are being dropped from production. The 400 is currently being sold for $79 in the U.S. when you include a $50 rebate from ATARI!!! How much do we pay? No comment.

A friend in the U.S. sent me a colour photo of the 600XL and it looks very nice indeed. You can see black and white photos of the full range in the last issue of ANTIC (i.e. July 1983). The $199 price tag will most likely come down to $149 (U.S.). The 800XL is rumoured to retail for around $299. There is currently also a rebate on the old 800, but it's $100.

Apparently, the capacity of a double density disk for the 1450XLD is a meagre 127k, or thereabouts. This is pretty disappointing. I've heard that the 1400/1450 will come with 128k or 256k of RAM (but don't quote me) and that the extra microprocessor is an 8088, a 16-bit processor or an 8-bit version of the 68000. Take your choice. Time will tell, but whatever happens, it sure is exciting!!

As though all this isn't enough, here's a rumour from Marc Russell Beniof from his column in the Eugene A.C.E. Newsletter June 1983. It refers to the next generation of ATARI computer, but I'd take it with a grain of salt -- maybe it's a late April Fool's joke:

> "...One of the newest things is a new computer called a mountain range and also a popular software house (Can You Guess Its Name?). This computer will have 5 special processors on board and a megabyte of onboard memory. It is the size of a book and the screen lifts up, in a similar way to a book cover. It is a 4 colour liquid crystal display. The music system (called by a popular composer's name, Ama-who?) is superb. It is planned for release sometime in 1984. I can hardly wait for this one..."

* * *

BUYERS BEWARE

How would you feel if this happened to you? You buy a new ATARI 850 Interface Module by mail from a store in Victoria on 14th March, 1983 because it's fairly cheap ($299) and it's hard to get in Sydney. It doesn't arrive after 4 weeks. You ring the store several times (STD) and get the run-around. The 850 eventually arrives, but minus the power supply, I/O cable, instruction manual, guarantee cards and invoice. It's obviously useless in this condition. You feel like you've been ripped off. You make several more 'phone calls (again STD). You get all sorts of promises, but nothing ever eventuates. Time drags on. You get desperate. You write to Futuretronics, but their help is of no consequence. You write to the N.S.W. Dept. of Consumer Affairs, but they refer your letter to the Ministry of Consumer Affairs in Melbourne. You send more letters to the store. Still nothing happens...

This is not a fairy tale. This is a brief account of what actually happened to one of our members. It is now over 4 months and the store has not delivered the complete 850 Interface Module! There is no point protecting the innocent, because their is no innocent. The store is COMPUTER COUNTRY (NATIONWIDE) PTY. LTD. The Computer Retailers' Association has had several complaints about them and it appears that the Ministry of Consumer Affairs in Melbourne has also had other complaints about them, yet they are still advertising in Australian Personal Computer. Anyway, I think the message is clear -- avoid COMPUTER COUNTRY like the plague, because they won't deliver the goods that they advertise.

Just before going to press, I heard that Consumer Affairs have stepped in and some of the missing components have arrived. Hooray for our side!

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SAD TALE No.2

This one's not quite so serious, but it does illustrate the ignorance displayed by some computer stores. A member was twice quoted $1315 by the Market Street Computerland store for the new Epson FX-80 printer. When he went to buy it, they wanted to charge him $1400 - an increase of $85! He quite rightly refused to pay it. This case also resulted in a couple of letters of complaint. This extract from one of our member's letters sums the situation up quite nicely:

> "...It appears sir, that your so called 'competent, professional personnel, with a commitment to good customer relations', have been incompetent, unprofessional

and exhibited POOR customer relations!! Might I suggest you start placing your faith somewhere else – your staff certainly doesn't warrant it!"

I'll vouch for that! This is the same store at which I enquired about the price of an ATARI 810 disk drive about a year ago. The salesman pointed to a 400 on display and said "Oh, you don't need it – there's already one built in." I collapsed in a heap, helpless with laughter. The salesman gave me a strange look and walked off. Needless to say, I haven't been back. This is also the store that used to charge $9.50 for Byte and Creative Computing!

In the meantime, our member bought his printer elsewhere (at a better price) and Computerland lost a potential long term customer.

The point of all this is to serve as a lesson to other members. You should exercise extreme caution when dealing with computer shops. We are going through a period where your average user knows much more about computers than your average salesman. The industry in Australia is lagging way behind the rest of the world and it will not even begin to catch up until computer stores wake up to themselves, educate their staff and stop treating their customers like imbeciles.

Well, that's my political comment for this month, seeing as I didn't write an Editorial. If any other members have bad experiences, please let us know so that we can warn others. We are here to protect the underdog, because nobody else will!
* * *

BULLETIN BOARD
Roberto Romano, Tony Reeve and myself went to Futuretronics at Mascot recently to try and sort out some of the communications problems for the Bulletin Board. We made a connection to the U.S. using Telelink I and a Sendata acoustic coupler, but the rest of our efforts were in vain. We couldn't establish a link using any of the Public Domain terminal programs. Roberto is doing a great job, but as we are pioneering an entirely new field in Australia, progress is going to be painfully slow. Thanks to Peter and Karl from Futuretronics for their time and effort. In the meantime, can't any of you other useless clots give us some help?
* * *

LIBRARY
As at 4th July, 1983, the following books are in the library. Some books are brought to meetings for you to peruse. Others will be brought along only if you request it by ringing our Librarian, Tony Dinallo on 797-0758. At the present time, books may only be borrowed if you need them to do bona fide research for a talk at a club meeting or, I guess, for an article for INSIDE INFO.
- Operating System User Manual (ATARI)
- Hardware Manual (ATARI)
- De Re Atari (ATARI)
- Operating System Source Listing Revision A (ATARI)
- Operating System Source Listing Revision B (ATARI)
- DUP.SYS Source Listing (ATARI)
- Book of ATARI Software 1983 by Stanton, Wells & Rochowansky
- Computers for Everybody by Willis & Miller
- The ATARI Assembler by Inman & Inman
- ATARI BASIC by Haskell
- Operations Summary Guide (ATARI)
- Inside ATARI BASIC by Carris
- Kids and the ATARI by Carlson
Plus ATARI Special Editions and various issues of The ATARI Connection, the APX Catalogue and sundry magazines.
* * *

PAST MEETINGS
At the June meeting, Tony Reeve gave a talk on the 6502, Peter Bamford showed VIDEO 80

(Charles Brannon's 80 column display from COMPUTE! April 1983, done entirely with software) and I gave an introduction to the display list.

At the July meeting, we had a good turn up, despite the train strike. I continued with the display list (including some demos of modified display lists, ANTIC modes 4 & 5, GRAPHICS 7+, page flipping, horizontal scrolling and DLI's) and Peter and Karl from Futuretronics told us all about the problems with the Australian version of the ATARI 410 Program Recorder and how to overcome them. Thanks for coming fellers! (I must get Peter to put that story about the hacksaw in writing, so that we can share it with other members.) There's more neat stuff in store for August and September, so try to make it along. Note that meetings will now be held at 6.0 P.M. in the room above Computer Wave, 325 George Street, Sydney until further notice.

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BACK ISSUES
What about back issues? We're totally out of them, that's what! However, nice guys that we are, a couple of committee members have volunteered to photocopy copies as needed, but they will cost you $4.00 each. This includes postage within Australia, so overseas members add a bit extra to cover air mail costs. Please allow 3-4 weeks for orders to be processed.

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A CRISIS
Last issue, there was a page missing from my copy of INSIDE INFO. Heaven forbid! That's almost as bad as a day missing from my life! To make matters worse, the missing page was slap bang in the middle of Odds & Sods (the bit about the FROTTI and the GOOBA and the HELKI and ...)! If any other member has a similar problem with blank or missing pages, then return the whole issue to the secretary and he'll send you a new one.

* * *

MAIL (OR LACK OF IT)
I love to receive letters from our members. There's just one problem -- I never get any (err, letters that is). How can an Editor possibly prepare the best ATARI magazine in Australia without some feedback from his readers? Please send any questions, hints & tips, cartoons, programs, articles, news, reviews, compliments, criticism or abuse to The Editor, A.C.E.(N.S.W.), G.P.O. Box 4514, Sydney, N.S.W. 2001. No letter bombs please.

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OTHER NEWS
I recently received a letter from Kelvin Eldridge of Personal Computers, 20 Northernhay Street, Regent, Vic. 3073. I gather this is a shop, but he also has a number of services for ATARI users. These include software rental ($3.50-$9.00 per week depending on the item, plus deposit), BASIC listing and word processor printing service, secondhand equipment and, of course, new software. Send a stamped self addressed A4 sized envelope for his latest price list or ring his answering service on (03) 470-5027 and leave a message.

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QUESTIONS & ANSWERS
Q: I have recently purchased an ATARI 822 Thermal Printer from Computer Wave. I found that the Operator's Manual for the printer does not explain its capabilities very well. Could you please give me some help? Do you have any suitable information that may explain the workings of the printer? It would be greatly appreciated!

-- Geoff Ashworth

A: Hmm, funny about that. I know of a computer whose operating manual doesn't explain its capabilities very well! Doesn't even mention P-M graphics, display lists, fine scrolling... I guess half the fun is exploring things yourself. Anyway, to answer your question, I'd love to help you, but I do not have an ATARI 822 myself, so I'm not very familiar with it. However, I may be able to refer you to some sources of information. To start you off on the right foot, I'd strongly suggest that you buy "Your ATARI Computer" by Poole, McNiff & Cook (Osborne/McGraw-Hill). Chapter 6 gives a really good coverage of how to use all the ATARI